CLAIMS

1. A ceramic package having a bottom, an opening, and an opening circumferential edge formed by integral molding,

wherein the ceramic package obtained by forming, on a plastic ceramic green sheet comprising (A) 100 parts by weight of a ceramic powder mainly composed of borosilicate glass, into which (B) 10 to 30 parts by weight of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group, or amino group and having a Tg in the range of more than -30°C to not more than +10°C is compounded, a conductor layer using a plastic conductive paste obtained by compounding, into 100 parts by weight of a conductive powder, 5 to 20 parts by weight of (C) a mixture of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg of not more than -30°C and an ethylcellulose-based binder,

press forming the resultant single layer of the ceramic green sheet having the conductor layer formed above to provide the bottom, opening and opening circumferential edge, and

calcining the integrally press formed ceramic green sheet.

2. A ceramic package as claimed in claim 1, wherein said acrylic copolymer (B) of said ceramic green sheet is a copolymer composed of ethyl acrylate or ethyl acrylate and methyl methacrylate and a monomer having a functional group of a hydroxyl group, acid amide group or amino group.

3. A ceramic package as claimed in claim 1,

wherein the acrylic copolymer of said plastic conductive paste (C) is a copolymer of n-butyl acrylate and 2-hydroxylethyl methacrylate and a ratio of the mixture by weight of the acrylic copolymer/ethylcellulose-based binder is 70/30 to 30/70.

4. A method for producing of a ceramic package having a bottom, an opening and an opening circumferential edge formed by integral molding, comprising the steps of:

forming, on a plastic ceramic green sheet comprising (A) 100 parts by weight of a ceramic powder mainly composed of borosilicate glass, into which (B) 10 to 30 parts by weight of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg in the range of more than -30°C to not more than +10°C is compounded, a conductor layer using a plastic conductive paste (C) obtained by compounding, into 100 parts by weight of a conductive powder, 5 to 20 parts by weight of (C) a mixture of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg of not more than -30°C and an ethylcellulose-based binder;

press forming the resultant single layer of the ceramic green sheet having the conductor layer formed above to provide a bottom, opening and opening circumferential edge; and

calcining the press formed ceramic green sheet.

5. A method for producing a ceramic package as claimed in claim 4, wherein the press-formed single layer of ceramic green sheet is calcined at 750°C to 950°C.

6. A chip resistor obtained by calcining a ceramic green sheet having a bottom, an opening and an opening circumferential edge formed by integral molding, by forming on a plastic ceramic green sheet comprising (A) 100 parts by weight of a ceramic powder mainly composed of borosilicate glass, into which (B) 10 to 30 parts by weight of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg in the range of more than -30°C to not more than +10°C is compounded, a conductor layer using a plastic conductive paste obtained by compounding, into 100 parts by weight of a conductive powder, 5 to 20 parts by weight of (C) a mixture of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg of not more than -30°C and an ethylcellulose-based binder, further forming, on the resultant single layer of the ceramic green sheet formed having the conductor layer thus obtained, a resistor and protector, followed by press forming to form a bottom, opening and opening circumferential edge, and

calcining the integrally press formed ceramic green sheet.

7. A chip resistor as claimed in claim 5, further having external electrodes formed only at the top and being flipped for mounting.

8. A chip resistor as claimed in claim 5, wherein the resistor is inserted into a recess to provide a thinness and flatness free from projections at the surface.

9. A method for producing a chip resistor obtained from a ceramic green sheet having a bottom, an opening

and an opening circumferential edge formed by integral molding, comprising the steps of:

forming on a plastic ceramic green sheet comprising (A) 100 parts by weight of a ceramic powder mainly composed of borosilicate glass, into which (B) 10 to 30 parts by weight of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters and 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg in the range of more than -30°C to not more than +10°C is compounded, a conductor layer using a plastic conductive paste obtained by compounding, into 100 parts by weight of a conductive powder, 5 to 20 parts by weight of (C) a mixture of an acrylic copolymer obtained by polymerizing 100 parts by weight of at least one monomer selected from (meth)acrylic acid esters, 1 to 10 parts by weight of a monomer having a functional group of a hydroxyl group, acid amide group or amino group and having a Tg of not more than -30°C and an ethylcellulose-based binder;

forming, on the resultant single layer of ceramic green sheet formed having the conductor layer a resistor and protector, followed by press forming to form a bottom, opening and opening circumferential edges; and

calcining the integrally press formed ceramic green sheet.

10. A method for producing a chip resistor as claimed in claim 9 further comprising forming external electrodes only at the top and flipping the chip for mounting.

11. A method for producing a chip resistor as claimed in claim 9, wherein the resistor is inserted into a recess to provide a thinness and flatness free from projections at the surface.